

From owner-qrp-1@netcom.com Wed May 10 23:52:48 1995
From: BrianN5ZGT@aol.com
Date: Wed, 10 May 1995 19:52:48 -0400
Message-Id: <950510192328_114213584@aol.com>
Subject: -

unsubscribe qrp-1 briann5zgt@aol.com

From owner-qrp-1@netcom.com Wed May 10 17:33:36 1995
Date: Wed, 10 May 1995 12:33:36 -0500 (CDT)
From: Kevin Anderson <anderson@ncrsun1.ncr.usace.army.mil>
Subject: 30m - an unmoderated, on-going, 24-hour "net"
Message-Id: <Pine.SUN.3.91.950510123000.1021B-100000@ncrsun1>

What's wrong with saying that you are meeting on 30m,
across a 10khz slot, for an on-going unmoderated "net",
where the "control op" just keeps changing and control
is being passed around? It's QRPers getting together to
chat where we can't set a time, but there is a common
reason to get together.

Cheers/73. kevin, KB9IUA (who is not 30m capable...yet)

Kevin L. Anderson, CENCR-PD-W, U.S. Army Corps of Engineers
Rock Island District Office, Planning Div.-Waterway Systems
Rock Island, Illinois 61204-2004, USA phone:(309) 794-5586
e-mail: anderson@ncrsun1.ncr.usace.army.mil

Opinions expressed here are my own and do not represent the
U.S. Army Corps of Engineers or the Federal Government.

From owner-qrp-1@netcom.com Wed May 10 14:42:30 1995
Date: Wed, 10 May 1995 09:42:30 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505101442.JAA28173@chuck.dallas.sgi.com>
Subject: 40M

Gang,

Thanks for all the email this a.m. for those of you
looking for me last night. I was on, but only a few

weak signals heard between 7.025 and 7.050 and no answers to any of my CQs. I called a couple of CQers, got QRZs in return and then they went off to someone else.

I did get the NN1G (SWL-30) in the new enclosure and it is very nice.

Of course, I did make two minor modifications. I put in the barrel power connector like you find in the Sierra and NC40a (not board mounted) for the power plug to match that of the 4Ahr gel cell.

I put in a 3.5mm stereo plug for the phones as I am using stereo Sony earphones with all my listening.

I bought from Radio Shack, one of the few times that I have gone in RS, two plugs: one mono to stereo 1/4" plug and one 1/4" to 3.5mm plug adapter. These are the plugs with builtin female jack. Two of these things together stick out from the rig, but hey you can't always be that neat. Beats the heck outta a homemade job for me. I use this on the OHR rigs and MXM stuff too.

One of the the things that I did note last night was that the "sync" light on the GC-1000 WWV receiver was locked onto WWV on 10.00000000 MHz until 0630Z at which time I called it a day. I listened on 30M and heard one packet station very weakly. I did not turn on the WWV monitor to see how strong 15KW was. I figure with 15KW you can just about ionize anything. :-)

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Thu May 11 04:12:26 1995
Date: Wed, 10 May 1995 23:12:26 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505110412.XAA00435@chuck.dallas.sgi.com>
Subject: 40M

I got on the air on 40M, by dusting off the Sierra. We gotta fire these puppies up and keep the electrolytics from going bad. :-)

7.040MHz area crowded and some digital garbage right in the middles of 7.040. So I move the dial on up to 7.120 area and work a W6 calling CQ.

Then back to 7.030 area and catch a K2, and here I thought I was really working DX to NE, but alas, Colorado QTH (Denver).

Well find free freq and call CQ. No answer.

Tuning down to 7.015MHz and hear a HJ0 working into USofA, so what the hey. First call nailed him. I like the DX ops and contest guys. They have good receivers and good antennas. They can nail a weak signal in a flash. Don't be afraid to work 'em. They even ask for QSLs. :-)

Listening at 7.040MHz and hear a WI0 call CQ. Here comes back AB50U. Tim, were you waiting there for one of the group? I'll try to work Tim after he finishes QSO.

Point: get on the air, even when the conditions are the best. It may be a struggle but there are some catches up there. Watch out N6ULU, Stan, your 100+ country total is in danger now. :-)

dit dit de someone who looks to have too much time on their hands. :-)

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Thu May 11 14:21:44 1995
Date: Thu, 11 May 1995 09:21:44 -0500 (EST)
From: David Moody <MOODY@admin.rose-hulman.edu>
Subject: Re: 40M
Message-Id: <01HQDE9QESPQHTRWYV@ADMIN.Rose-Hulman.EDU>

IN%"adams@chuck.dallas.sgi.com" writes:

>Point: get on the air, even when the conditions are the best. It may
>be a struggle but there are some catches up there. Watch out N6ULU, Stan,
>your 100+ country total is in danger now. :-)

I think you meant "not the best," and I can't agree more. If a band sounds dead, get on, aim (if you can) the antenna in a direction that might work, and call CQ. The saying "the band doesn't die, just the operators" can be very true. I like to operate 10m, and right now, it is a band with very little activity. During the last sunspot dip, I put out a 100W CQ on 10m. The band was "dead." Nothing at all was heard. After about 5 minutes of calling CQ, I heard a weak signal. It was a VK answering my CQ on a dead

band! The signals were 339 both ways with some strange QSB, but we made it. After signing with him, he then answered a K9 (which I couldn't hear), and worked a few others also. I tuned up and down, and there was nothing else on the band.

To paraphrase Chuck's point: If the band sounds dead, it just might not be dead. Get on and listen, if you don't hear anything, call CQ for awhile. You may be surprised. The Gump philosophy of propagation (the bands are like a box of chocolates) does hold true. Also, if a tree falls in a forest and there is no one there to hear it, who cares if it makes a sound. Also, if everyone is listening for the tree to fall, and someone else doesn't knock one over every now and then, you'll never hear anything. Boy, should that be _The Tao of Ham Radio_. Hmm, have to think about that one.

Oh well, that is my two milliwatts, and if you are ever tuning around 28.110 when the band sounds dead, maybe you'll catch one of my long CQs, or I'll catch you if you try the same. Hey, this might catch on. :-)
See you on 30m over the next three months, and everyone had better QSL. I look forward to this propagation test. Ought to be lot's of useful data collected.

72, David Moody, KD8NY, C'mon Field Day

```
-----  
David A. Moody          | E-mail: David.Moody@Rose-Hulman.edu  
Admin. Programmer/Analyst | Finger: mgrdam@crux.Rose-Hulman.edu  
Rose-Hulman Inst. of Tech. | Amateur Call: KD8NY (CW QRP) ex-WB9MMD  
Terre Haute, IN  USA  47803 | (VMS Rules!!! (but RSTS was fun.))  
Wk Ph:  812.877.8183      |  
-----
```

Any facts expressed within belong to everybody.
Any opinions expressed within are my own and are not
necessarily the same as my employer, family, friends, etc.
It is up to you to know the difference.

From owner-qrp-l@netcom.com Wed May 10 23:36:43 1995
Date: Wed, 10 May 1995 23:36:43 GMT
From: dick@kanga.demon.co.uk (Dick G0BPS)
Message-Id: <10226@kanga.demon.co.uk>
Subject: 9MHz SSB Filters

Hi gang,
After that posting about the 455Kc filters
thought I would jump in about some I have.
9 MHz, SSB, 2.4Kc BW, 5000hm in/out, 6 pole.

got about 50 left at =A310 each (\$15)
plus shipping, say \$20 inc.
I have an US account so not probs there.
TTFN de Dick

```
*****
*   Dick G0BPS / G0R00 / 9H3JX  Kanga Products  *
*           Email to Dick@kanga.demon.co.uk      *
*           Packet msgs to me via GB7RMS         *
*   or even write a letter to me via snail mail  *
*                                           *
*   isn't this "communications hobby" wonderful! *
*****
```

From owner-qrp-l@netcom.com Thu May 11 01:35:35 1995
Message-Id: <199505110138.UAA17391@ns.onramp.net>
Date: Wed, 10 May 1995 20:35:35 -0500
From: cmassey@Onramp.NET (Cleve Massey)
Subject: <didn't bother with a subject>

subscribe cleve massey WD5BOR cmassey@onramp.net

```
*****
Some people never find it
Some only pretend
But I just want to live
Happily ever after, now and then
```

From owner-qrp-l@netcom.com Thu May 11 03:21:37 1995
Date: Wed, 10 May 1995 22:21:37 -0500 (CDT)
From: "Perry W. Ogletree" <pogletre@mail.coin.missouri.edu>
Subject: Re: CCW / DSP
Message-Id: <Pine.SUN.3.91.950510221751.14448C-100000@bigcat>

On Tue, 9 May 1995, H Smith wrote:

```
>
> Another thing that I reccommend is the Texas Instrument DSK (DSP Starter
> Kit). The DSK costs $99 and comes with an assembler and a debugger.
> There is quite a bit of code that can be downloaded from the internet,
> including the W9GR code ported to the DSK. There is a CW passband filter,
> a noise filter and a SSB hetrodyne filter. I was using the noise filter
```

> on 40 meters during the thunderstorms. It works fine. The band pass
> filter is fine but it is centered at 1KC. That can be lowered by putting
> in different coefficients and re-assembling.
>
> There is also some packet and Amtor DSK code out there for the digi-droids.
>
> So you get a DSK and start loading code into it. And if you are daring,
> you can even "roll your own".
>
> If there is interest, I will prepare a file and ship it upon request.
>
> Are there anymore "Digital Signal Processing" types on the list???
>
> Smitty, NA5K
>
> Henry Smith (hbs@crl.com)
>
>
>
>
>
Please post the source for the DSK and send the code!

Perry
N0NMC@N0LBA.#CEMO.MO.USA.NOAM (Packet)
pogletre@mail.coin.missouri.edu (Internet)

From owner-qrp-l@netcom.com Thu May 11 22:44:09 1995
From: rohrwerk@netcom.com (John Seboldt)
Message-Id: <199505112244.PAA29194@netcom18.netcom.com>
Subject: Re: CCW / DSP
Date: Thu, 11 May 1995 15:44:09 -0700 (PDT)

Thanks for the info on the TI DSK kit. But for those of us with less time
and inclination, can someone with more of same do a nice DSP for the
Campbell R2 that will handle all the audio quadrature and demodulation (lots
of modes and bandwidths, please -- even hi-fi to 5 kHz or better... maybe
even 16-bit for near CD quality.... dream on)

: John Seboldt	rohrwerk@netcom.com /	I am Bach of Borg...
: Amateur radio K0JD...	/	your style will be
: Church of the Annunciation,	/	assimilated.
: Minneapolis	/	

From owner-qrp-l@netcom.com Thu May 11 01:09:16 1995
Date: Wed, 10 May 1995 20:09:16 -0500 (EST)
From: cebik@UTKVX.UTCC.UTK.EDU
Subject: Curtis Chip
Message-Id: <Pine.3.89.9505102053.A543373635-0100000@utkvx.utk.edu>

A case of lost message: would the individual who had Curtis 8044ABMs for sale at \$17.95 (I believe) e-mail me with an address--if there are any left. Just found an early FAR board for it (with weighting not implemented) and do not want to rob the chip from my opto-keyer. Thanks in advance.

-73-

LB, W4RNL

L. B. Cebik, W4RNL	/\	/\	*	/	/	/	(Off) (615) 974-7215
1434 High Mesa Drive	/	\	\	\	----	/\	(Hm) (615) 938-6335
Knoxville, Tennessee	/\	\	\	\	/	/	(FAX) (615) 974-3509
37938-4443 USA	/	\	\	\			cebik@utkvx.utk.edu
QRP/CI 2572 G-QRP 7203 CQC 125 NEQRP 347 NORCAL 1111 MIQRP 1432							

From owner-qrp-l@netcom.com Thu May 11 01:48:04 1995
Date: Wed, 10 May 1995 23:18:04 -0230 (NDT)
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>
Subject: Curtis Keyer Kit with extras
Message-Id: <Pine.OSF.3.91.950510231521.11936A-1000000@terra.nlnet.nf.ca>

qrp-l gang,

I recently posted a comment that I knew of no Curtis Keyer kit suppliers who use the anit-transient FET in their design as highlighted in Curtis application notes. Well I stand corrected - learn something new every day. Just received this nice private note from Dennis at Jade Products and I asked him if he minded if I posted it to the list (he didn't - hi). The keyer looks very interesting and is competitively priced with the other Curtis offerings out there. And a 55 page manual to boot - I hope it tells me how I can copy 65 wpm in my head like Chuck - maybe I should just get a Curtis chip implanted in my bean. So here goes..

73/72 Bob V01DRB/WA6ERB

From blanchard@nac.enet.dec.com Wed May 10 22:29:38 1995
Date: Sun, 7 May 95 23:19:16 EDT
From: "Dennis, K1YPP, 226-5982" <blanchard@nac.enet.dec.com>
To: bgobrick@terra.nlnet.nf.ca

Subject: Re: Anti-burp?
Status: 0

Oh, ok Bob. Actually, I am the design engineer for the Jade Products Inc. Curtis Keyer Kit. I did incorporate the BS170 circuit in the keyer kit we have. The board measures 2"x3.5" (5 x 8.9 CM) and to the best of my knowledge has every possible feature that the Curtis Keyer can create. This includes an optional speed meter (a gimmick as far as I am concerned, just calibrate the knob), weighting control, positive or negative keying outputs, A or B Iambic, a 100 MW audio amp, transformer coupled for DC isolation, operates from 5 to 18 volts, manual key etc. The board I/O uses 0.100 center spacing so that one can use connectors if desired, or just solder wire to it. It also has four mounting holes, or it can be mounted from the full-sized audio and speed control potentiometers. The board is double-sided, plated thru-holes with full silk screen and a 55 page Heath-like manual, with full schematics etc. We really tried to do it "right".

It is going to be featured in an upcoming CQ review, as well as 73. It is also going to be in the next issue of the ARRL Handbook.

I would be more than glad to have Jane, KA1FUN, at JADE, send you a catalog and spec. sheet if you are interested. Thanks for the help...

72'

Dennis K1YPP

PS: The goal of the board was to make it small enough to mount in almost any typical transceiver, ie: HW-series, Ten-Tec, old tube rigs etc. In fact, it includes space on the board to install a high current 350 Volt transistor for keying either positive or negative tube radios.

Bob Gobrick V01DRB/WA6ERB/VE2DRB Newfoundland, Canada

QRPer Galore - QRP ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: bgobrick@terra.nlnet.nf.ca
rgobrick@public.compuserve.nf.ca

Compuserve: 70466.1405@compuserve.com

From owner-qrp-l@netcom.com Thu May 11 18:14:58 1995
From: KT3A@aol.com
Date: Thu, 11 May 1995 14:14:58 -0400
Message-Id: <950511141457_115177637@aol.com>
Subject: Curtis Question

I received the schematic, pc board, and chip from the NorCal club.

Questions:

1. What is the current drain on the circuit? Idle? Keying?
2. Is R9 (500k Speed pot) linear or audio taper?
3. Tune button recommended? Ground the key output?

Thanks,
72 de cameron

From owner-qrp-l@netcom.com Thu May 11 20:00:58 1995
Date: Thu, 11 May 1995 13:00:58 -0700
From: Roger.Pease@eng.sun.com (Roger Pease)
Message-Id: <9505112000.AA11683@immigrant.Eng.Sun.COM>
Subject: Curtis spec sheet

There seem to be a fair amount of questions popping up about Curtis keyers, etc. Is the postscript version of the Curtis chip spec sheet/app note available some on the net?

I found it helpful when I was building my NorCal chip+FAR board keyer.

Chuch Adams had it on the sgi server for a while (thanks), but it seems to be gone from there now (darn those sys admins! :-)).

Is it available somewhere now? Is there a place where we can make it available? If you're on a Unix box I can e-mail it to you. (Warning: it will come compressed, uuencoded and split into something like 20 parts, but with a script to

reassemble the parts for you. You got to have
bourne shell, uuencode and uncompress.)

I wonder how Chuck is doing with his simple keyer
with anti-burp board layout?

_Roger

Roger M. Pease - KE6PPI - pease@Sun.COM

From owner-qrp-1@netcom.com Wed May 10 14:24:47 1995
Message-Id: <9505101424.AA25579@garnet.inel.gov>
Date: Wed, 10 May 1995 08:24:47 -0600
From: LVE1@inel.gov (Larry East)
Subject: Dan's Small Parts

Has a new address for Dan surfaced yet? If you have it, please email it to me.

Thanks & 72, Larry W1HUE/7

From owner-qrp-1@netcom.com Thu May 11 22:35:07 1995
Message-Id: <9505112234.AA20940@garnet.inel.gov>
Date: Thu, 11 May 1995 16:35:07 -0600
From: LVE1@inel.gov (Larry East)
Subject: Dan's Small Parts

Posted this two days ago (on Tuesday) and haven't seen it reflected yet, so
will try one more time...

Has a new address for Dan surfaced yet? If you have it, please email it to
me; I need it for a QQ article.

Thanks & 72, Larry W1HUE/7

From owner-qrp-1@netcom.com Thu May 11 03:44:34 1995
Date: Wed, 10 May 1995 20:44:34 -0700 (PDT)
From: "Hal R. Waite" <halwaite@netcom.com>
Subject: Dayton Hamvention Swap Table Availability
Message-Id: <Pine.3.89.9505102030.A22994-01000000@netcom15>

Gentlemen:

Since you have recently returned from Dayton, perhaps you can give me the procedure for obtaining a swap space (or getting in the drawing for said space). Do you purchase an entry ticket first? When do you apply for the space and when will you be informed as to availability?

They finally noticed the difficulty with the weather and I understand that next year's event will be in May.

Thanks in advance. Hal K4GFI/7 halwaite@netcom.com

From owner-qrp-l@netcom.com Thu May 11 14:04:38 1995
Date: Thu, 11 May 1995 09:04:38 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505111404.JAA00999@chuck.dallas.sgi.com>
Subject: Re: Dayton Hamvention Swap Table Availability

Hal,

Just 'cuz they moved it to May I wouldn't think any differently about the wx. Maybe we can get someone to post the WX report from Dayton for the month of May to test what it will be like next year. :-) :-) Just kidding gang.....

Someone who has gotten fleamarket space can post to the qrp-l group how to go about it. I'd check with the boatanchor gang, they always have someone there.

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Thu May 11 16:33:49 1995
Date: Thu, 11 May 1995 12:33:49 -0400 (EDT)
From: prvalko <prvalko@oakland.edu>
Subject: Re: Dayton Hamvention Swap Table Availability
Message-Id: <Pine.3.89.9505111236.B22158-0100000@saturn.acs.oakland.edu>

Anyone who bought a ticket will get a mailer sometime next winter detailing Dayton 1996. You apply for your table then.

73 =paul= wb8zjl

p.s. you had to completely fill out the ticket and drop it in the prize drawing box, of course.

From owner-qrp-1@netcom.com Thu May 11 03:14:45 1995
Date: Wed, 10 May 1995 22:14:45 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505110314.WAA00308@chuck.dallas.sgi.com>
Subject: dual-gate MOSFETs

Gang,

I remember sometime in the last few months someone mentioning the demise of the dual-gate MOSFETs.

I found a ton of MPF131s here in Dallas, well a few thousand, whatever that weighs out to be. :-)

So, will someone tell me what the specs are. These puppies are house numbered and with mfg date of 6223, so they have been around a while.

Cost is 3/\$1. The are 5mm in diameter with four legs out the sides and bent down at 8 to 9mm distance apart. Cylinder is about 4 mm thick. It kinda reminds me of four legged spider standing there.

So my question is, are these replacement equivalent for the critters in the Solid State Design book (40673's)? Of in W1FB's QRP book?

Inquiring minds wanna know while we still have time on our hands. :-) This week only.....

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-1@netcom.com Thu May 11 16:38:33 1995
Date: Thu, 11 May 1995 09:38:33 -0700

From: myers@bigboy73.west.sun.com (Dana Myers)
Message-Id: <199505111638.JAA04489@vr1000.West.Sun.COM>
Subject: Re: dual-gate MOSFETs

> From adams@chuck.dallas.sgi.com Wed May 10 21:55:19 1995
> Subject: dual-gate MOSFETs
>
> Gang,
>
> I remember sometime in the last few months someone
> mentioning the demise of the dual-gate MOSFETs.
>
> I found a ton of MPF131s here in Dallas, well a
> few thousand, whatever that weighs out to be. :-)

> So my question is, are these replacement equivalent
> for the critters in the Solid State Design book
> (40673's)? Of in W1FB's QRP book?

After a brief glance at the Motorola data sheet, I'd say these
are probably 100% useful in the places that 40673s show up
in the DeMaw books, or any other amateur HF application.

From owner-qrp-l@netcom.com Thu May 11 00:57:28 1995
Date: Wed, 10 May 1995 19:57:28 -0500 (EST)
From: cebik@UTKVX.UTCC.UTK.EDU
Subject: Re: How to cure J-38 walking
Message-Id: <Pine.3.89.9505101917.A543373635-01000000@utkvx.utk.edu>

I have used the J-38 reversal successfully. I also use an old fashioned
desk blotter and holder at the operating position. Then glued a piece of
blotter to the bottom of the J-38 base. Blotter on blotter stays put.
Current blotter piece is ten years old, so it pretty durable for the
cost. However, not suited to operating out in the rain. But then,
neither am I.

-73-

LB, W4RNL

From owner-qrp-l@netcom.com Thu May 11 11:58:00 1995
Subject: IQ130
From: brian.carling@acenet.com (Brian Carling)

Message-Id: <2a6.23649.500@acenet.com>

Date: Thu, 11 May 1995 06:58:00 -0500

From: brian.carling@acenet.com

I can't believe this!

(adams@chuck.dallas.sgi.com) writes:

CA>I didn't expect so many complaints ...

I didn't see ANY complaints. I saw a few suggestions about some minor changes you could have made!

CA>I had hoped that it would

CA>be a three month exercise is studying the propagation of 30M during

CA>the summer months and during the near minimum of the sunspot cycle.

Indeed a great idea, plus some fun operating.

CA>I know about the rules against contests on 30M. I read.

The one guy who I saw call it a contest, immediately apologized for his mistake. Aren't you over-reacting Chuck?

CA>Geez gang. Lighten up.

I think they did!

CA>The exercise is hereby cancelled. EOT.

Why does this sound like what one hears on a grade school playground?

Perhaps it is the similarity in attitude to when a child says: "You aren't going to play my way? OK then, I will take my toys and go home! SO there, NAH!!"

CA>dit dit

CA>Chuck Adams K5FO CP-60 adams@sgi.com

Perhaps a "dahdidahdit didahdidit" would have been more appropriate for you today! :-(

~ SLMR 2.1a ~ You CAN trust the government; Ask any Indian!

From owner-qrp-1@netcom.com Thu May 11 11:58:00 1995

Subject: IQ130

From: brian.carling@acenet.com (Brian Carling)

Message-Id: <2a6.23650.500@acenet.com>

Date: Thu, 11 May 1995 06:58:00 -0500

From: brian.carling@acenet.com

DGM>o fail to see where you UNDERLINE the main point about
DGM>having a receiver that works for 30m. Chuck mentions that participants
DGM>are required to use both a transmitter and receiver that operate at 30m,
DGM>and you reply that the requirement eliminates 95% of those reading the
DGM>notice.

Perhaps we are mis-communicating here. First you say the above, then you
appear to get it in your next paragraph! Could it be, Gary that
you didn't read the entire message before you replied to it?

What I was discussing was the requirement of the use of a homebrew
receiver.

DGM> I can understand your point about time required to build stuff... we're
DGM>all busy. But you don't need big \$\$\$ to build a 30m receiver. It can
DGM>be done for less than \$30, in kit form including PCB.

DGM> - Gary N2JGU

Sorry Gary, I want to build a transmitter for 30m, but I am not
comfortable with the idea of building a rcvr. There is no point.
It proves nothing about propagation which was the point of this
exercise, and to have some fun.
Today Chuck claims it was to get us to "put down the soldering iron
and do some operating." Confusing to say the least. Either way,
I will be on 30m and hope to work many of you in JUNE, JULY and
AUGUST!!

73 DE AF4K/QRP

~ SLMR 2.1a ~ You CAN trust the government; Ask any Indian!

From owner-qrp-1@netcom.com Thu May 11 11:58:00 1995

Subject: IQ130

From: brian.carling@acenet.com (Brian Carling)
Message-Id: <2a6.23651.500@acenet.com>
Date: Thu, 11 May 1995 06:58:00 -0500

From: brian.carling@acenet.com

RZ>Sorry to hear about the cancellation of what was promising to be an
RZ>interesting communications exercise.
RZ>I hope nobody will object to an unofficial posting of "most states
RZ>worked" by the "unvocal majority".....I for one intend to make a serious
RZ>WAS attempt over the summer with my sierra. I invite those similiarly
RZ>inclined to post the "unofficial" results. Who knows, there might yet be
RZ>an "unofficial" surprise from the frozen north at the end of August! ;-)

OK fair enough Rick. We could post our # of states tallies every so
often on here and see how everyone is doing.

Glad to join with you in "uncancelling" the event!

Just do it!

~ SLMR 2.1a ~ You CAN trust the government; Ask any Indian!

From owner-qrp-1@netcom.com Thu May 11 23:19:39 1995
From: Byron8LCZ@aol.com
Date: Thu, 11 May 1995 19:19:39 -0400
Message-Id: <950511191458_115509151@aol.com>
Subject: Re: IQ130

...I for one intend to make a serious
WAS attempt over the summer with my sierra. I invite those similiarly
inclined to post the "unofficial" results. Who knows, there might yet be
an "unofficial" surprise from the frozen north at the end of August! ;-)

Dr. Rick Zabrodski BSc, MD, CCFP(E) * VE6GK

=====

I agree.

Its time we burned up the airwaves with our QRP xcvrs. i still need 3 more
states on 30m for the coveted W.A.S. QRP CW 30m award. And i'm not giving up
!

See you on 30

72, Byron WA8LCZ

From owner-qrp-1@netcom.com Wed May 10 23:59:46 1995
Date: Wed, 10 May 95 16:59:46 PDT
From: davev@atkc.com (Dave van De Kerk)
Message-Id: <9505102359.AA25223@venus.atkc.com>
Subject: j-38 moving around in shack

How to make a J-38 key not move around when you are working in the shack:

Supplies: legal length clip board.
Packing labels
Mouse pad (optional)

- 1) Put the packing labels all over the exposed metal clip part of the clipboard. The thick FedEx ones work well. I'm partial to Intermec Thermal Lightning 4 inch by 6 inch labels myself.
- 2) Use the clipboard clip to hold down the key.
- 3) Put the mouse pad in the middle of the clipboard for a thin arm cushion. The 1/4 inch foam and cloth ones work nicely. The thin plastic ones aren't as nice.

Your arm holds the clipboard in place. The clipboard holds the key in place. The labels prevent anything from shorting out.

I used this for about nine months. Worked fine. You can even keep copy paper and a pen on the clipboard for fast copy in close quarters.

Now, how to prevent the J-38 from giving that occasional "bounce" when making contact. I had this dream about a week ago about this really marvelous straight key with a heavy brass frame and big navy style knob and solid silver contacts mounted in magnets to make the connection either positively open or positively closed.

=====

This message does not constitute any official or unofficial statement or policy of American Turnkey or any other organization, corporation or institution.

David P. van De Kerk
American Turnkey
714-557-9050 x-207 voice

Manager, Systems Integration
Santa Ana, CA USA
714-557-9056 FAX davev@atkc.com

KE6GXD

From owner-qrp-1@netcom.com Thu May 11 13:47:11 1995
Date: Thu, 11 May 1995 08:47:11 -0500 (CDT)
From: SrA Jonathan Sherman <sycjns@lightning.safb.af.mil>
Subject: kenwood filters & St.Louis QRP group
Message-Id: <Pine.A32.3.91.950511084631.35164A-100000@lightning.safb.af.mil>

OK, never mind about the filters... :(Does anyone here know a contact
in the St.Louis QRP group?

DISCLAIMER: I'm not a programmer, but I play one at work!

```
..-----  
| #USAFETAC System Programmer# | Proposed Linux creed: 'I'd rather spend 2 |  
| <sycjns@thunder.safb.af.mil> | days reading someone else's code than 5 |  
| <jsherman@nyx.cs.du.edu> | minutes listening to Musak waiting for |  
| HAM: n9vwf BIKE: '75 cb750k | technical support which isn't.' |  
| DoD#1396 BIKE2: '76 cb550f | _____=o&&>o_____ =o&>o_____ |  
| FAX: (618)256-3772 HP48gx | 80c51, 8088, EPROM, EEPROM |  
'-----
```

GC v1.0.1: GCS/M d* p c++++ l++ u++ e+ m+ s n-- h--- f? g-/g+++ w- t r x+/++

From owner-qrp-1@netcom.com Wed May 10 14:53:00 1995
Date: Wed, 10 May 1995 14:53:00 +0000
From: william.redfearn.cmwd01@nt.com
Message-Id: <"22379 Wed May 10 09:54:09 1995"@nt.com>
Subject: Kenwood filters sold out!

When I called AES this morning (10:54 EST) all the
Kenwood YG-455S-1 filters had been sold :-(.
So anyone got any extras for sale, hopefully close to the
\$6.95 price?

73 - Dave.

=====

Dave Redfearn, SR PC LAN Analyst Northern Telecom RTP, NC.
ph.(919) 992-3925 email: cmwd01@nt.com qrl? de N4ELM/qrp

All opinions are my own, no one else wants them.

From owner-qrp-l@netcom.com Wed May 10 20:42:29 1995
From: CQC@aol.com
Date: Wed, 10 May 1995 16:42:29 -0400
Message-Id: <950510164227_114009605@aol.com>
Subject: Lost address

I am looking for Russ, a '3', who dropped me a line a few weeks ago regarding HW-8 mods.

Mail returned.

Rich, WOHEP
Colorado QRP Club

From owner-qrp-l@netcom.com Thu May 11 12:51:31 1995
Date: Thu, 11 May 1995 07:51:31 -0500 (EST)
From: David Moody <MOODY@admin.rose-hulman.edu>
Subject: Re: made by MFJ.
Message-Id: <01HQDB3W9MUGHTRWYV@ADMIN.Rose-Hulman.EDU>

I have had very good luck with my 9030 and 9015. Yeah, there is a little drift during the first 30 minutes or so, but it just requires a small bump of the tuning dial. I just wish that they made one for 10m, but right now it probably wouldn't sell that well. (Anyone from MFJ, hint, hint...)

I have had good luck with MFJ equipment, but I do know people that haven't, but they have been able to work quite well with MFJ on getting the problem resolved, or getting something else.

They, like Ten Tec (more American made stuff) aren't afraid to have their customers crack open the case and try to fix the problem. In fact, they encourage it, within reason of course. I can't say that much for any of the Yaecomwood type radios.

Like anything, your mileage may vary. If you are interested in any radio, try it out first. If you have a candy store with operating positions, take advantage of it. If you can find a friend who will lend you the rig for a week or so, do it. There is nothing worse than buying something, getting it home, trying it out, and then realizing it was not what you wanted, or worse. If you can't do that, then this list and others are the best thing towards getting as much information as possible before making that big purchase. Thank somebody for the Internet, as it has done a great deal towards making companies produce better stuff. Uncontrollable (at least by the companies) word of mouth advertising can make or break a product in this day and age. (That was a hint to all of you manufacturers. Pay

attention to your customers, current and prospective. Their voice is going to get bigger.)

Oh well, I went from the MFJs to telling the manufacturers to listen up. I guess that is within the limits of standard topic drift. ;-)

That's my two milliwatts worth.

72, David Moody, KD8NY, C'mon Field Day

```
-----  
David A. Moody          | E-mail: David.Moody@Rose-Hulman.edu  
Admin. Programmer/Analyst | Finger: mgrdam@crux.Rose-Hulman.edu  
Rose-Hulman Inst. of Tech. | Amateur Call: KD8NY (CW QRP) ex-WB9MMD  
Terre Haute, IN USA 47803 | (VMS Rules!!! (but RSTS was fun.))  
Wk Ph: 812.877.8183      |  
-----
```

Any facts expressed within belong to everybody.
Any opinions expressed within are my own and are not
necessarily the same as my employer, family, friends, etc.
It is up to you to know the difference.

From owner-qrp-1@netcom.com Thu May 11 18:40:30 1995
Message-Id: <9505111840.AA03306@us1rnc.bb.dec.com>
Date: Thu, 11 May 95 14:40:30 EDT
From: Bill Acito 11-May-1995 1435 <acito@asdg.enet.dec.com>
Subject: Re: made by MFJ.

I haven't owned anything by MFJ that I haven't had to either open up and shake out spare parts, tighten a screw, or solder a missing connection.

I have not owned any QRP rigs... this is all SWR analyzers, tuners, power meters, etc...

your mileage may vary,

b

. - I own my own words -

Bill Acito
acito@asdg.enet.dec.com

|d|i|g|i|t|a|l|
Digital Semiconductor - Fab 6
Hudson, MA

kc1gs (qrp-ne #260, arrl life)

From owner-qrp-1@netcom.com Fri May 12 00:45:53 1995
From: Michael Marmor <mmarmor@pluto.njcc.com>
Message-Id: <199505120045.UAA29846@pluto.njcc.com>
Subject: Re: made by MFJ.
Date: Thu, 11 May 1995 20:45:53 -0400 (EDT)

> I haven't owned anything by MFJ that I haven't had to either open
> up and shake out spare parts, tighten a screw, or solder a
> missing connection.

I hate to say it but this is my experience also. Several times I have had to send things to them for repair. If you thought the build quality of their equipment was lacking you should try dealing with their customer service/repair department -- downright AWFUL. They would fix one thing and break another....

I will **never** buy anything MFJ again. The hobby isn't any fun when everything is broken.

I have no financial interest in MFJ (thank god!!!) Just a disgruntled customer.... nuf said

Mike, AA2UJ
mmarmor@pluto.njcc.com

From owner-qrp-1@netcom.com Thu May 11 15:58:35 1995
Date: Thu, 11 May 1995 08:58:35 -0700
Message-Id: <199505111558.IAA03465@scn.org>
From: nwqrp@scn.org (SCN User)
Subject: mic for qrp+

Subject: Another QRP+ Mic Idea
To: ab6dg@netcom.com (John Dundas)

Hello John -
Here's what I did about finding a mic for my QRP+. After looking

around for a commercial mic, I found a (very) cheap cassette recorder microphone with the built in on/off sliding switch. It happens to be a low impedance mic (guess it's about 50 ohms), and it works just fine. The voice quality could be better...but it works. CUL, DE N7MFB
West Seattle, WA

--

Mail routed by Brian High, KV9X from the Northwest QRP Club BBS. Please support local amateur radio clubs and public access internet services like the Seattle Community Network. Thanks!!

From owner-qrp-l@netcom.com Thu May 11 15:41:08 1995
Date: Thu, 11 May 1995 10:41:08 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505111541.KAA01307@chuck.dallas.sgi.com>
Subject: My Apologies to the Digital Gang

Group,

I was sent email regarding my reference to digital transmissions on 7.040MHz as garbage. My apologies if anyone took my posting as regarding digital transmissions of any kind as being less than optimal use of spectrum space.

I was just peaved at the time, 'cuz I was and have in previous times been using a frequency when someone using Pactor/Amtor came on frequency. I know that 7.040MHz is the International calling frequency for RTTY, but I still think that someone should listen on frequency before transmitting. I do and it is the preferred way of operating. The emissions last night were not RTTY. I can almost copy RTTY without a computer :-)) and have snuck up on RTTY signals with 100 cycle filter on and tried it. I can't do it. :-))

I know for a fact that a few Pactor/Amtor operators use their setup without the speaker on. I just think it is a couple of these people that make life a little more difficult for some of us and I don't put all digital operators in that class.

I worked the HJ0 at 7.015 last night and tuned lower in freq and heard a digital signal down at 7.005MHz. Fine, but I still think that is too low in frequency and that doesn't have anything at all to do with the Extra class range or anything else. I have

been an Extra for more than 20 years, but I probably have only a handful of QSOs below 7.025. I just hang out around 40 up from the end of the band.

So, don't take my posts as CW being the only mode for QRP, it's just my preferred mode. SSB is getting more and more air time with the new kits from NorCal and others. I just don't have the experience to comment on it. I hope and pray that I don't come across to this group as being arrogant. I've screwed many times on this group and others and will continue to do so. I ain't proud.

I can't do a digital rig for \$100 complete. Maybe I just outta borrow a TNC or whatever and listen to what's going on for a few days and see how a typical QSO is done.

I think I posted this before: in 30+ years only one RTTY award has been issued for 1,000 miles/watt. My belief that spectrum width and power levels required for reliable continuous communications are proportional seem to hold up by inspection of the data. If digital doesn't take up much that much more than CW, why spread out all over the band? We don't need to spend the bandwidth here on qrp-l discussing this, but we've had the problem and will continue to have it during QSO parties and regular operating.

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Thu May 11 18:53:05 1995
Date: Thu, 11 May 95 13:53:05 EST
From: "Bob White" <Bob_White@CCMAIL.AEROSYS.LORAL.COM>
Message-Id: <9504118002.AA800225512@CCMAIL.AEROSYS.LORAL.COM>
Subject: Nebraska Field Day

I will be visiting my in-laws during the weekend of Field Day (24/25 Jun) in Kearney, Nebraska. I am interested in taking part in a Nebraska QRP Field Day. Is there anyone on the list from mid Nebraska that would like to try a class B--Battery Field Day? I will be bringing a Ten Tec Scout, a QRP Plus, a S&S ARK-4, tuner, a laptop computer, a VHF/UHF dual bander, a KPC-3, a contest keyer and key, wire, a sling shot and weights, (I guess I should drag along some trees!) and a 40 amp marine deep discharge battery. I love all this new small equipment. You can sure hide a lot of it in a van.

72,

Bob White W03B WASTP(77.18W)
bob_white@ccmail.aerosys.loral.com

P.S. I'll even pack a mike!

From owner-qrp-1@netcom.com Thu May 11 00:59:33 1995
Date: Wed, 10 May 95 23:17 BST-1
From: oddjob@cix.compulink.co.uk (Stephen Walters)
Subject: New project. Turn an old FT101 into a QRP portable.
Message-Id: <memo.214461@cix.compulink.co.uk>

Boys boys Boys...and Ladies too

You missed the point of what I was suggesting....

Let me explain, my new project is to turn an old FT101 into a QRP portable, In between practising my morse.

I am about to buy ANOTHER FT101 (older MK2 not a Z) with a narrow 250Hz filter, and spare set of PA Valves, for #(Censored)UKP !

This will have a transistor RX and everything up to the exciter, before the driver, is transistor too.

These radios are SO hackable, robust and flexible (QRP~qro)

The only thing they are not, is portable, although you can do as I am intending, with is this...

Take an FT101

1. Remove valve PA, Fan and Driver, and convert the space saved into a battery compartment! Add a 12v Motorcycle or Radio-Control type compact gel-lead acid or NICAD pack.

2. install a small 1-10watt solid state PA

3. Install either an ATU/transmatch etc or Second VFO or an audio filter where the Load and plate controls used to be....

4. Do some weight training!

ps. I am going to get some help.....??? boys?

oddjob@cix.compulink.co.uk

From owner-qrp-l@netcom.com Wed May 10 16:33:14 1995
Date: Wed, 10 May 1995 14:03:14 -0230
Message-Id: <199505101633.0AA31313@public.compuser.net>
From: rgobrick@public.compuser.net (Robert J. Gobrick)
Subject: NN1G Mark xx Rigs

QRP-L gang,

I've enjoyed reading Chuck K5FO posting of the "history" (how time flies) of the Dave Benson NN1G transceiver development. Chuck - you need to make an official posting of this to the QRP WWW archive or maybe an article for the QRP or NEW ENGLAND QRP 72 magazine (the home of NN1G).

Couple of comments:

1. For folks who are west of the Mississippi (or west of the Appalachian Chain) the famous club that Dave (and many other patriotic minutemen) qrpers belong to (these terms used to help make a memory link - not implied to say that they are part of the some militia group) is the NEW ENGLAND QRP Club - or QRP Club of NEW ENGLAND (W1FMR schizophrenia). I noticed at Dayton this year and in some recent postings (see above) that the club has been badly mis-represented as the North East QRP Club. Say it isn't so that the grade school education in the US has come to the point where we don't even know where New England is located - why I believe Canadian school history classes may be even taught that. Pleaseeee remember New England - if the loss of this name becomes wide spread we may have our neighbors to the north and across the pond come back to claim this territory. If that happens then the "hotbed" of QRP in the States will disappear.....

2. The NN1G Mark I and NN1G Mark II is a good way to remember the "history" of the dual circuit board transceiver that Dave designed. I make the distinction that the NN1G Mark I boards were smaller and had no mounting holes. The NN1G Mark II boards were a little larger and had mounting holes, in addition to the obvious minor upgrades that Dave made.

3. There is a NEW NN1G Mark II design and circuit board - I dub this the NN1G Mark IIA design. This is the design that appears in the new 1995 handbook and these are the 12/94 printed circuit boards that Far Circuit sells. I was able to buy the last two boards at Dayton for \$9/pair (Chuck missed these) and they are actually labelled as the NN1G 12/94-TX and the NN1G 11/94-RX boards. The boards are the best so far - still single sided with a big ground plane all around and the component side has all the parts

labelled - neat. Also the 1995 ARRL Handbook NN1G Mark IIA (memorize that name) had some circuit changes. For those intersted, Roy W6EMT (of NW8020 fame) has an errata sheet of notes that he made on the original NN1G Mark I design. It appears to me that Dave may have incorporated some of Roy's comments into his NN1G MarkIIA rework. Anyway the boards look good enough that I bought a pair to replace the one's in my yet unbuilt Dan's Small Parts NN1G Mark II kit. Now for the NN1G Mark IIB boards as Willaim Shakespear would say....

4. Although I liked Chuck's idea early on as dubbing the QRP Club of NEW ENGLAND kit the 30-40 or 40-40 as the NN1G Mark III, I now think the name now does an injustice to the original NN1G rig. The NEQRP 3040/4040, or now correctly called the Small Wonder Lab SWL-160, SWL-80, SWL-40, SWL-30 is actaully a "stripped" down version of the original design made as a small one board compact and easy to build qrp rig. A good design and along with it's new case a real "bargain" for the QRper but it is not as good a design as the NN1G Mark IIA. One of the reasons why you can buy a 20 meter version of the NN1G Mark IIA but not a SWL-20 - the SWL designs just runs out of steam at the higher frequency. Nothing wrong with that since Daves's intent, I'm sure, was not to have the original NEW ENGLAND QRP Club project go to 20 meters.

Anyway some more long winded qrp lore and commentary for the up-and-coming QRP Archive WWW. I think we should all urge Chuck to enter his writeup into the QRP archive (do this before both ends of his candle flame meet - Chuck seems to be in "overdrive" after Dayton - hi).

73/72 Bob V01DRB/WA6ERB

From owner-qrp-l@netcom.com Wed May 10 19:39:25 1995
Date: Wed, 10 May 1995 17:09:25 -0230
Message-Id: <199505101939.RAA03859@public.compusult.nf.ca>
From: rgobrick@public.compusult.nf.ca (Robert J. Gobrick)
Subject: Re: NNIG Mark xx Rigs

Chuck actually raises a good question about a good one board design of the NN1G MarkII. Actually the NorCal QRP and soon to be Wilderness Radio (Wayne Burdick's design) Sierra transceiver follows the NE-602 vintage of rigs first started by Rich Littlefield.

But the best implimentation to date of the NE602 Littlefield/Burdick/Benson design is the one that Roy Gregson W6EMT wrote up in a past issue of the QRPP called the NW8020 (that's NorthWest...). Roy took the best of everyone's design, added RIT, W7EL type QSK, 5 watts (yeahhh) and sized the

single board so it fits inside a common Radio Shack box. I had one on order from Dan's Small Parts (about \$70) before Dan went on vacation - sure would like to build one. The latest issue of Hambrew has a multiband version of Roy's rigs (actually four of his rigs stacked on top of each other - hi). By the way Roy also has no AGC in his design but I think that was a matter of not being able to find an inexpensive way to do it.

Once we get our QRP archives set up we need to download some of the past reviews of these type rigs - I don't have my notes handy but I think (apologize if I get this wrong) that Paul NA5N did an evaluation on the NW8020 a month or so ago.

Anyway more NE602 lore..

73/72 Bob V01DRB/WA6ERB

>Bob,
>
>Thanks for the update and information on the NN1G. It's too
>complicated for me. :-)
>
>What's this "overdrive" stuff? I once had someone tell me
>the same thing about my code speed in 1961. He said I had
>two speeds, full-on and off. :-)
>
>It must have been the long drive translating the dividing
>centerline into dahs. :-) I'm still uncomfortable sitting
>for any length of time.
>
>Bob is absolutely correct about the 20M version of the older
>NN1G rig, i.e. it does have a very good receiver in it. Maybe
>we outta put Bob in charge of coming up with a single board
>version with RIT. :-) Although I've seen with the two board
>set how putting them back to back in a vertical position really
>makes for a compact lil rig. The .ps file that I had for a
>while that a lot of people picked up was for the NN1G Mark II
>in the Jan 94 QQ. I'll put it along with the parts list on
>the new site this week. Announcement to come along on friday
>for the changeover. Stay tuned.
>
>dit dit
>
>--
>Chuck Adams K5FO CP-60 adams@sgi.com
>

From owner-qrp-l@netcom.com Thu May 11 10:58:16 1995
From: PDouglas12@aol.com
Date: Thu, 11 May 1995 06:58:16 -0400
Message-Id: <950511065814_114818488@aol.com>
Subject: Re: NNIG Mark xx Rigs

I did the NW80/20, and it is the best of the Littlefield implementations.
I still have the review for any who want it. Also have a final version of the
Round Robin Review coming out in QRP Quarterly which includes the NW80/20 .
Preston WJ2V

From owner-qrp-l@netcom.com Thu May 11 13:47:13 1995
Date: Thu, 11 May 1995 09:47:13 -0400 (EDT)
From: Rodney Clayton <rclayton@umd5.umd.edu>
Subject: Re: Norcal keyer board questions
Message-Id: <Pine.OSF.3.91.950511094602.30941B-100000@wolfe.umd.edu>

I ordered one of these a couple of weeks ago. Should I have recived it
yet? Thank's Rod

From owner-qrp-l@netcom.com Thu May 11 04:36:32 1995
Date: Wed, 10 May 95 21:36:32 PDT
Message-Id: <9505110436.AB08082@altair.csustan.edu>
From: dh@altair.csustan.edu (Doug Hendricks)
Subject: NorCal Membership Certificates

NorCal Membership Certificates are now available. Bob Finch, N6CXB has
designed a great looking membership certificate for the NorCal QRP Club.
The certificate is 8 x 10 in size but printed on 8 1/2 x 11 paper, so it can
be trimmed to fit whatever size frame you have.

The certificate is printed on parchment type paper, with the year in Bright
Red on the left and the NorCal Logo on the right in black.

```
*****
*
*
*          1995          Logo
*
*
*          The NorCal QRP Club acknowledges that
*
```

*
* Doug Hendricks - KI6DS, NorCal #2 *
*
* is a Member in good standing who has demonstrated the ability, *
* skills, and desire necessary to "do more with less." *
*
*

Doug Hendricks - KI6DS, NorCal #2 is printed in Bright red ink. All other text is in black. The certificates cost \$2.50 and are mailed in a 8 1/2 x 11 inch manilla envelope so they won't be folded. Bob has handled this and is doing a great job. To order, send \$2.50 plus your Name, Call, and Address to Bob. He will process the certificate and return to you. Please allow several weeks for delivery, as each certificate is printed. Make checks and money orders out to Bob Finch, and not to NorCal. The offer includes postage.

Bob's Address:

Bob Finch
7530 Ridgeview Lane
Lafayette, IN
47905

From owner-qrp-l@netcom.com Thu May 11 20:08:23 1995
Message-Id: <n1411921105.56301@msmailgw1.arlut.utexas.edu>
Date: 11 May 1995 14:08:23 -0600
From: "rohre" <rohre@arlut.utexas.edu>
Subject: Renewing Nicad packs

There is a well used procedure around the lab that seems to revive Ni Cads of the common sizes, for another year, if they are around two years old. (Two years seems to be the lifetime of AA nicads I see in HT applications.)

You can do it with a car battery, or a power supply with a similar voltage, up to 15 Volts, and some current behind it. I have used CB radio supplies, but my favorite here in the lab is a 20 amp 15 volt, regulated supply.

YOU MUST, however, limit the maximum current to be drawn, the idea of having a high current supply is to sustain the voltage even when the cell is in a low resistance state. We commonly use solid hook up wire or thin test leads of 24 to 26 gauge, like telephone inside wire that runs to outlets.

The best description of the process is "zapping" each individual cell that will

not take a charge or that has reversed polarity. It may not work to zap the series connected battery pack, because that typically has some good cells and one bad one buried in the middle. The best results are on a cell by cell basis. Zapping is applying momentary contact of the 1.25 volt cell to the 15 volt source, (or 12 volt).

You "pop" the end of the positive solid wire to the cell positive contact, having clipped on the negative contact with the other supply (negative) lead. You are using the same polarity as the normal cell polarity to burn out the internal shorts and crystal dendrites that grow inside the Ni Cad cell and prevent it taking a charge.

There WILL be a spark, so wear safety glasses. Solid wire, (not stranded), or a small alligator clip can be used, but a copper one is best, as there is a chance of welding a contact with the wire, if you linger on the cell contact TOO LONG. Sometimes you almost have to do that to cure reversed polarity, but repeated zaps will usually do that job. Stranded seems to have more of a tendency to weld one of the strands, is the reason the solid telephone wire was suggested.

You measure the voltage of the cell before and after and when you see it go to 1.23 or higher, you can go to the next cell, and once all are at a nominal 1.23 Volts DC, each; you can apply a normal charger to the pack. If a pack has not been used for awhile try several charge - discharge cycles before concluding you need to zap cells. It is normal for NiCads to require several cycles to reach full capacity.

All the above is only for NI CAD rechargeable cells, do not use this for other types of rechargeable packs. The key to success is doing the individual cells of 1.23 volts, and other rechargables may not offer easy access to the individual cells. Also, the crystal or dendrite growth is a characteristic of Ni Cads. The failure mechanism of other batteries include chemical consumption of the plates, or other problems that "zapping" can not help. Use care, caution and safety in doing such, particularly in dealing with a large constant current source as a storage (auto) battery. A fused 1 amp lead has been used as an emergency disconnect. This may not be necessary with a current limited, (regulated) power supply as the constant current source.

As gross as the procedure sounds, it does work repeatedly, and is the only way short of replacing cells or the pack to overcome the Nicads poor habit of discharging unequally. Be sure to do it to packs out of the radio or device they power, as you do Not want to accidentally apply overvoltage to the electronic circuit. This includes care around those packs with integral chargers built into the pack.

Another thing I have found in experimenting with NiCads use. In packs left in a hot car interior, even in the shade under the seat, charged Ni Cad packs like the AEA HF Handi talkies, or VHF talkies will last a week with infrequent use;

before needing recharging of the normal kind. ALKALINE cells of the normal, non Renewal kind, last much longer with enough power to use the radio for casual band scanning at drive time. (Low duty cycle transmit use). I extended the life of the Ni Cads charge somewhat by buying a flexible soft sided 6 pack cooler at Wal Mart discount stores to keep the battery powered radios from getting so hot in the parked car in the sun. I guess the next step is those thermionic coolers that you can get to keep the cold 807's in the car, and you can put the nicads in there as well!

If a cell is leaky, replace it, as the pressure has built up and damaged the seal. That will be evidenced by a white powder around the top of the cell.

73, Stuart
K5KVH
rohre@arlut.utexas.edu

From owner-qrp-1@netcom.com Wed May 10 23:53:50 1995
Date: Wed, 10 May 1995 19:53:50 -0400
Message-Id: <95051019535006@sescva.esc.edu>
From: pcalcand@sescva.esc.edu (PETER CALCANDY)
Subject: Reviving Ni-Cad batteries

My battery pack wont take a charge anymore. I remember reading somewhere how you can apply high voltage to the battery pack and it may bring it back to life. Anyone have the gory details?
Thankx
Peter N2KPY

From owner-qrp-1@netcom.com Thu May 11 14:28:20 1995
Date: Thu, 11 May 1995 09:28:20 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505111428.JAA01120@chuck.dallas.sgi.com>
Subject: Re: Reviving Ni-Cad batteries

Peter et.al.,

Having been an R/C modeler in a past life (my late Uncle invented the Adams actuator) I can attest to this little trick. I still use it, but warning-danger-Will Roberson, use it with extreme care.

Usually, a NiCad battery pack is made up of individual cells that have about 1.25V or so per. Take the pack apart very carefully so that you can reassemble it later. Take the old VTVM/DigitalMulti or whatever and measure the voltage across each cell. You may find one or more

cells at 0V or even at a negative voltage (reverse charged). These cells are the ones that you wanna "zap".

Take a 12V source - I use a GelCell - and carefully apply it to the dead cells with plus-to-plus and minus-to-minus for just a second or two. Then take the meter and again measure the voltage. If it comes up, then the cell is fixed. If, after several "zaps", the cell is still not alive, then take it out and properly dispose of it. Sometimes they can't be revived no matter what you do.

I personally would not do this to the whole battery pack at once as you asked in your post. The applied voltage would be distributed across the good cells also and either reduces the effect to the "bad" cells or may do damage to good ones (INMHO).

OK, Peter, N2KPY, you asked for the gory details. :-)

BTW: Anyone remember "galloping-ghost" days of R/C. The single channel rudder-only days of R/C. Kinda like battery operated tube days. :-)

dit dit

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-l@netcom.com Fri May 12 02:47:21 1995
Date: Thu, 11 May 1995 22:47:21 -0400
Message-Id: <95051122472137@sescva.esc.edu>
From: pcalcand@sescva.esc.edu (PETER CALCANDY)
Subject: Reviving Ni-Cad Batteries

Thanx to all who offered suggestions on reviving ni-cads. Since I couldn't open the case, I had to apply current to all the batteries at once. I used an automobile battery and hooked it up positive to positive and negative to negative for a moment (half a second). That was all that was needed and when I put the meter to the battery pack, all was well. I had a cordless screwdriver which was on the fritz (technical talk) and I opened that up and brought it back to life as well. It worked like a defribulator!!! I was warned that the batteries could explode using this method so I took all the precautions. To make a long story short, I am back in Battery City! Thanx to one and all.

Regards,
Peter N2KPY

From owner-qrp-l@netcom.com Wed May 10 15:51:00 1995
Date: Wed, 10 May 1995 11:51:00 -0400
From: "todd (t.w.) nichols" <tnichols@bnr.ca>

Message-Id: <"20304 Wed May 10 11:52:40 1995"@bnr.ca>
Subject: re:Surface mount techniques?

In message "Surface mount techniques?", Steve wrote:

>
>Does anyone on this list have any experience at doing homebrew building
>with surface mount components? I'm wondering how well the "ugly
>construction" technique will work with these parts or if there are other
>ways with commonly available equipment to assemble circuits out of these
>parts-- thanks in advance for any ideas.
>
>'72
>
>Steve Henry
>AA0VB
>Fort Collins, Colorado

Steve,

I guess that depends on what "commonly available equipment" means. I'll tell you some of the stuff I know about. It boils down to two basic steps: getting a board of some kind, and assembling (soldering) the components.

If you have a PCB CAD program, then it's a snap to make a PCB. As small as surface mount can get, it's generally best to either get a Gerber photoplot made, or make a 4X or 8X printout and have a printshop reduce it to 1X on a mylar film. Then you can do photographic PCB processing. Barring that, my version of ugly construction is as follows: use your CAD program (or use your actual components on the tabletop!) and arrange your parts layout so that the parts have their connected leads in little "islands" (this is somewhat hard to describe). Then, to make the PCB, take a blank copperclad board and put little pieces of masking or electrical tape where those islands would be, and etch the board. Then solder the components down. Of course, this will make your layout take up more room than it has to, and you might have to have some pads that are just junctions for jumper wires. Finally, some companies (my literature is at home right now) sell breadboards just for prototyping surface mount circuitry. The nice thing about these is that they have patterns available for IC's, but they may be a little pricey; I think about \$3 for very tiny ones to about \$20 for large ones. If you want I can bring in some sources and post them.

So much for the board. Now as to soldering: many people really hate having to solder surface mount parts. Many people will require magnification (I probably will in a decade or so :-), but I solder (and desolder) lots of surface mount parts in my work as a high-speed module designer. Just remember that there are lots of ways to skin a cat; develop your own technique, and if someone else says that the world will end because you are soldering incorrectly - ignore them. Do what works for YOU.

Lots of people say to use fine tips. I find that fine tips are OK for high pin count devices, but for discretes and 8 or 14 pin type devices, the fine tip does not have enough thermal mass to make a quick solder joint. And make no mistake - you do want to be quick about this and not linger on the joint, or you run the risk of damaging the semiconductor, or just burning up the part itself. After all, you can't clip a heat sink on the lead like in the old days :-). So I use a regular tip on most parts. I also do another no-no: I put solder on the iron and then put it on the part! (Ooooo, I can hear people cringing now :-). Bear with me. I do this on plated boards with pre-tinned or nickle-barrier-terminated components, so the flux is almost superfluous. I hold the component down with a toothpick or something else small, get a LITTLE solder on the tip, and touch it to one lead-and-pad. That holds the component down. THEN go and solder the other leads the "correct" way (iron to joint, solder to joint), and then I generally come back and reflow the first joint I made, just to make sure.

I have also heard about people pre-tinning the pads on the PCB, then holding the component down with a toothpick, and reflowing each joint. The problem I have with this is that the end you reflow first will sink to the board, while the other end stays up in the air on top of the solder on the pad. When you reflow that side, the RIGID part, already anchored on the other side, will NOT move. It will not be planar to the board. This is bad for heat transfer, and it's bad for microstrip circuits. It is also difficult to keep the part from sliding off the pads, because the solder's surface tension makes a round solder blob when you pre-tin the pads. So, while you try to hold it and reflow that first joint, the part is sliding around.

As for desoldering, I use solder wick (despite the bad things I have heard about THAT). I think that the bad things apply mostly, again, to high pin count devices, and I agree in those cases.

By the way, I assume, in all of this, that you are not using PQFP's (plastic quad flat packs) with a couple hundred pins around the periphery! Those are a different ball game entirely.

I hope that the length of this post is excuseable. I have noticed a certain reluctance here to deal with surface mount, and a reluctance in the amateur community in general. Unless you are dealing with the high pin count devices, I don't think that the reluctance is warranted. Now, if you want to talk about real reluctance, we'll talk about flex circuits :-)

Todd

Todd Nichols Bell Northern Research, Ottawa, Ontario (613) 765-3560
tnichols@bnr.ca KB0HQ/VE3 BNR didn't say it; I did
"Ensign, set a new course. There's coffee in that nebula!" - Capt. Janeway

From owner-qrp-1@netcom.com Thu May 11 19:40:05 1995
From: Glen Leinweber <leinwebe@mcmail.CIS.McMaster.CA>
Subject: surface mount? Naw
Message-Id: <1995May11.154005-0400@[130.113.234.7]>
Date: 11 May 1995 15:40:05 -0400

Thinking of surface mount components for your projects?
For Mike's ultra small teeny weeny rigs -- OK you bet!

For regular Norcal, NE40-40 type radios -- no go.
Why use tiny resistors, transistors and capacitors when the
other components like variable caps, pots, jacks and toroids
are so much larger?

If you're into D.C. to daylight frequency coverage
with fancy DDS oscillators and much complicated no-tuning
circuitry, it may make sense to use surface mount. If you're
into production that is. How many people in this boat?

Or it may make sense for UHF, microwave stuff. How
many in this boat?

For homebrewers handcrafting uncomplicated rigs
in the HF band, it just doesn't make sense.
Glen Leinweber VE3DNL leinwebe@mcmail.mcmaster.ca

From owner-qrp-1@netcom.com Thu May 11 15:01:25 1995
Date: Thu, 11 May 1995 10:01:25 -0500
From: adams@chuck.dallas.sgi.com (chuck adams)
Message-Id: <199505111501.KAA01182@chuck.dallas.sgi.com>
Subject: Re: Thanks for the Dues!

Gang,

From the title, this is from an email that I got from Roger, WBOJNR,
membership chair of the CQC, Colorado QRP Club. To me it was exciting,
so I'd like to share with the group.

He mentioned that they had 40 members show up at their Saturday meeting!!
They have about 30 check-ins on their club repeater net in Denver.

Now for a new club, i.e. less than two years old, this is exciting news.

Jim Fitton, W1FMR, talked about clubs at the Dayton doings in a forum.

One of the things that I see happening and everyone else sees too is the rapid growth of the QRP community.

Here are K5FOs top reasons for the growth (INMHO):

1. QRPers are doers. We don't get together and talk about the WX (except just the week before Dayton). We bring rigs (we can carry them), antennas, keys/keyers, pictures, QSL cards, and the list goes on.....
2. We share. We bring schematics, parts, trade stuff, sell stuff, and in general exchange information freely. Kind of reminds me of the early days of UNIX.
3. We don't take up a lot of power and frequency spectrum. We don't cause TVs, radios, telephones, etc. to go on the fritz. (Usually)
4. We can work the world with less than 5 watts.
5. We do, in the spirit of the hobby, operate when we can, but we give first to our daily lives and to the community.
6. We help others to learn. We are there to answer questions, find hard to get parts, and always remember that once we were at a point where we didn't know the base from the emitter either.
7. With QRP, you can have it all. Build, experiment, operate, swap/trade/sell, buy, go to Dayton, eat at Two Guys from Italy,

I'm sure that each and everyone in this group can add additional information and reasons. We see amateur radio evolve over a period of time as is true of any human endeavor. I think that some hams are tired of working with computers everywhere, at work and at play. I know that I do, so working on rigs and getting on the air relieves the pressures from day to day living. I want the challenge of being heard just above the noise level and the thrill of working another country with just less than 1 watt. It's my choice and I love it.

So, everyone has a chance to get in on the ground floor (each day is the ground floor for the future) for the next level. Look at NorCal, NE, NorTex, NW, and the other clubs. Open up the doors and they will come. Just cut the politics and put the egos on the back burners. Everyone wants to contribute, let 'em. They are paying the bills with dues. Without the members there will be no club.

Soap box off. dit dit and I do have too much time on my hands this week. :-)

--

Chuck Adams K5FO CP-60 adams@sgi.com

From owner-qrp-1@netcom.com Thu May 11 13:42:27 1995
Date: Thu, 11 May 1995 08:42:27 -0500 (CDT)
From: SirA Jonathan Sherman <syncjns@lightning.safb.af.mil>
Subject: The 455KHz filter mentioned repeatedly on this list
Message-Id: <Pine.A32.3.91.950511083738.27460A-100000@lightning.safb.af.mil>

I have completely lost the phone number and company name that was
supplying those for a decent price... can anyone help?

DISCLAIMER: I'm not a programmer, but I play one at work!

```
..-----  
| #USAFETAC System Programmer# | Proposed Linux creed: 'I'd rather spend 2 |  
| <syncjns@thunder.safb.af.mil> | days reading someone else's code than 5 |  
| <jsherman@nyx.cs.du.edu> | minutes listening to Musak waiting for |  
| HAM: n9vwf BIKE: '75 cb750k | technical support which isn't.' |  
| DoD#1396 BIKE2: '76 cb550f | _____=o&&>o_____o_____ |  
| FAX: (618)256-3772 HP48gx | 80c51, 8088, EPROM, EEPROM |  
'-----  
GC v1.0.1: GCS/M d* p c++++ l++ u++ e+ m+ s n-- h--- f? g-/g+++ w- t r x+/++
```

From owner-qrp-1@netcom.com Thu May 11 09:06:11 1995
Date: Thu, 11 May 95 00:13 BST-1
From: oddjob@cix.compulink.co.uk (Stephen Walters)
Subject: turn an old FT101 into a QRP
Message-Id: <memo.215788@cix.compulink.co.uk>

My new project is to turn an old FT101 into a QRP portable, In between
practising my morse!

I am about to buy a FT101 (older MK2 not a Z) with a narrow 250Hz
filter, and spare set of PA Valves.

This will contain a transistor RX and everything up to the exciter,
before the driver, is transistor too.

These radios are SO hackable, robust and flexible (QRP~qro)

The only thing they are not, is portable, although you can do as I am
intending, with is this...

Take an FT101

1. Remove valve PA, Fan and Driver, and convert the space saved into a battery compartment! Add a 12v Motorcycle/Radio-Control compact gel-lead acid or NICAD pack.
2. install a small 1-10watt solid state PA
3. Install either an ATU/transmatch etc or Second VFO or an audio filter where the Load and plate controls used to be....
4. Do some weight training!

ps. I am going to get some help.....all suggestions gratefully RX!

oddjob@cix.compulink.co.uk

From owner-gqrp-l@netcom.com Thu May 11 00:56:30 1995
Date: Wed, 10 May 1995 22:26:30 -0230 (NDT)
From: Bob Gobrick V01DRB/WA6ERB <bgobrick@terra.nlnet.nf.ca>
Subject: RE: VERY LONG, Z-Match Transmatch Circuit
Message-Id: <Pine.OSF.3.91.950510222053.10232D-100000@terra.nlnet.nf.ca>

Z-Matchers,

For those so inclined to be interested there is an article in the latest May 95 issue of the RSGB Rad-Com on a Single Coil Z Match ASTU by Osborne Postle G3EFZ. I know not everybody gets RadCom but the bottom line is that the Z match looks like a simple project with some weird old parts - 500p single gang var cap, dual gang 350p var cap and coil. You need slow tuning on caps as the author points out since the tuning is sharp. His unit tuned 3.5 to 11 and 13-30 Mhz with gap between 11-13 Mhz. Maybe we can get some of the gang over on the gqrp-l list to comment.

73/72 Bob V01DRB/WA6ERB

Bob Gobrick V01DRB/WA6ERB/VE2DRB Newfoundland, Canada

QRPer Galore - ARCI, GQRP, NORCAL, NEQRP, COQRP, MIQRP, NWQRP

Internet: bgobrick@terra.nlnet.nf.ca
 rgobrick@public.compusult.nf.ca

Compuserve: 70466.1405@compuserve.com

From owner-qrp-l@netcom.com Wed May 10 21:19:32 1995
Date: Wed, 10 May 1995 16:19:32 -0500 (CDT)
From: Al Suttles <asuttles@tenet.edu>
Subject: Re: Whiterook Mini-Keys
Message-Id: <Pine.OSF.3.91.950510161319.24775B-1000000@Gayle-Gaston.tenet.edu>

Preston, glad to see your evaluation of the MK-22. I, too, ordered it with great uncertainty, afraid it would be a waste of my money. And when I received it my first reaction was a decided 'UH-OH!' because it looked like a piece of worthless cheap plastic. But my overall reaction has been the same as yours...well worth the \$8.95 after a day or two of getting used to.

G4ZPY, who makes elegant (and expensive) keys in England has a brass mini-key which he offers with a strap to go around your leg for better stability in sending. Thought I might gerry-rig something like that with this little red whiterook mini.

I was just getting ready to order the paddle MK-44 as well. But I'll learn some patience and see what your reaction is since you've already put your money down. Thanks for the review---well done.

Al Suttles, AB5ZB

From owner-qrp-l@netcom.com Thu May 11 05:03:09 1995
From: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org (Mike Czuhajewski)
Subject: Re: Why people get unsubscribed
Date: Thu, 11 May 95 00:03:09 EST5EDT
Message-Id: <1995May11.000309.27702@wb3ffv.ampr.org>

Just a comment about the standard advice to send e-mail to listserv@netcom.com to "subscribe qrp-l". Does it make any difference to the computer if it is "subscribe qrp-l" or "subscribe QRP-L"? Is it case sensitive? I have reason to believe that it is not, since I told a few people to use "QRP-L". The point is that "qrp-l" is ambiguous and error prone--people can, and sometimes do, think that final character is the number 1 (one). In fact, I have had two people tell

me in the last three months that they thought it was a number one. It is much clearer to use "QRP-L", which cannot be misinterpreted, and I have been typing it that way when telling people how to subscribe. (I have had some people thank me for clearing it up for them, but have not yet had anyone curse me for telling them to use the wrong case :-))).
73 and Queue Our Pea DE WA8MCQ

--

Mike Czuhajewski, user of the UniBoard System @ wb3ffv.ampr.org
E-Mail: Mike.Czuhajewski@hambbs.wb3ffv.ampr.org
The WB3FFV Amateur Radio BBS - Located in Baltimore, Maryland USA
Supporting the Amateur Radio Hobby, and TCP/IP InterNetworking

From owner-qrp-l@netcom.com Thu May 11 23:19:33 1995
From: Byron8LCZ@aol.com
Date: Thu, 11 May 1995 19:19:33 -0400
Message-Id: <950511191451_115509051@aol.com>
Subject: Re: Your comments on MFJ QRP rigs?

Hi Jay,

If you're looking for a single band assembled QRP transceiver with a center detent RIT (receiver incremental tuning) and room for an internal optional cw Filter and iambic keyer. The MFJ is worth the price, about 159 or 169 dollars. some versions have a drift problem, about 2 khz per hour, but that can be fixed by replacing two capacitors in the VFO section, C32 and C33, to the right of the tuning capacitor. The receivers are super-hets, have a 6 pole crystal filter in the I.F. and work well. I have two of these units, 40m and 20m, and think they're really nice. Not many QRP rigs run the full 5 watts or have room for the "goodies" inside. Plus theres 2 screw holes on each side of the rigs, so you can stack them for multi-band use or group them with external keyers, power supplies or antenna tuners. It can get expensive if you plan on buying more than 2 transceivers.

The MFJ can be run off your car battery, and is cheap enough, that you wont mind leaving it in your car. Now you can practice you "mobile CW" skills while cruising down the highway.

1 band is 159, 2 bands are 320, 3 bands are 480, 4 bands are 640. For 600 dollars you can buy a QRP Plus, it has 160 thru 10 meters, LCD readout, dual VFO's, runs CW and SSB, has an S meter, and a built in digital SCAF audio filter thats terrific.

Good luck and QRP

72, Byron WA8LCZ Detroit

From owner-qrp-l@netcom.com Thu May 11 13:57:11 1995
Date: Thu, 11 May 1995 08:57:11 -0500 (EST)
From: cebik@UTKVM.UTCC.UTK.EDU
Subject: RE: Z-Match Transmatch Circuit
Message-Id: <Pine.3.89.9505110859.A543391506-0100000@utkvm.utk.edu>

Those interested in the Z-Match may wish to look at the Winter, 1995 Communications Quarterly, pp 27-32, for Charles Lofgren, W6JJZ, "Beyond the Z-Match: The IBZ Coupler." JJZ uses a single coil assembly with switched taps, plus switching for single-ended and balanced output. IBZ="improved balance Z-match," because he adds a 1:1 balun at the input end to improve the balance of the output ("under some conditions"). The link-coupled coil assembly goes on a T-225-6 core. The link capacitor is a BC variable, while the other capacitor is a 500 pF/section 4-section surplus unit with wide-spaced plates.

For QRP, the JJZ circuit seems to verify that the coil can be wound on a toroid core (smaller for us). HAMCALC9 has a toroid calculator with all the Amidon cores, so scaling the core and turns numbers for switching should be a routine exercise. The 4-section capacitor may be a bit of a problem to shrink to field size. The input 1:1 balun cannot hurt and may be small enough at 5 watt levels to tuck into the assembly unnoticed. This is one more case where experimenters have found that a balun at the input end of a coupler is superior for balanced feeds than at the output end where it is subject to a wide range of reactance (which it does not especially like--gets hot under the turns).

Hope something here is useful.

-73-
LB, W4RNL

From owner-qrp-l@netcom.com Thu May 11 14:34:47 1995
Date: Thu, 11 May 1995 08:34:47 -0600 (MDT)
From: Rick Zabrodski <zabrodsk@med.ucalgary.ca>
Subject: RE: Z-Match Transmatch Circuit
Message-Id: <Pine.SUN.3.91.950511083154.25173C-1000000@ume>

I have built the tuner in question. Works fine. Plan to use this design in my own "personal" qrp omni box.

Dr. Rick Zabrodski BSc, MD, CCFP(E) *

VE6GK

Email: zabrodsk@med.ucalgary.ca * NorCal 519 ARCI 7650 GQRP 8329
Phone 403-271-5123 Fax 403-225-1276 * "Power is no substitute for skill"

On Thu, 11 May 1995 cebik@utkvx.utk.edu wrote:

> Those interested in the Z-Match may wish to look at the Winter, 1995
> Communications Quarterly, pp 27-32, for Charles Lofgren, W6JJZ, "Beyond
> the Z-Match: The IBZ Coupler." JJZ uses a single coil assembly with
> switched taps, plus switching for single-ended and balanced output.
> IBZ="improved balance Z-match," because he adds a 1:1 balun at the input
> end to improve the balance of the output ("under some conditions"). The
> link-coupled coil assembly goes on a T-225-6 core. The link capacitor is
> a BC variable, while the other capacitor is a 500 pF/section 4-section
> surplus unit with wide-spaced plates.

(You can switch in fixed capacitors if needed, I did this with my "prototype")>